

Amendments to the Claims

The following listing of claims will replace all prior versions, and listings, of claims in this patent application:

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Claims 1 to 33 (canceled).

34. (new) A system for integrating data representing weather parameters prevailing at a plurality of geographic locations into television broadcast signals originating from and related to the plurality of geographic locations, the system comprising:

a monitoring station located at each of the plurality of geographic locations, the monitoring station including,

means for sensing the weather parameters prevailing at each of the plurality of geographic locations, and for generating weather parameter signals representing the weather parameters, and

means for transmitting the weather parameter signals from the monitoring station;

a base station including,

means for receiving the weather parameter signals from the monitoring station, and for

providing the weather parameter signals to the base station,

means for generating icon signals representing weather parameter icons in response to the weather parameter signals, the weather parameter icons representing the weather parameters sensed at the plurality of geographic locations, and

means for converting the icon signals into television signals representing the weather parameters, the television signals being in a format suitable for integration into the television broadcast signals;

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production switching means for receiving the television signals representing the weather parameters and the television broadcast signals, and for combining the television signals representing the weather parameters and the television broadcast signals so that first icon signals representing first weather parameter signals sensed at a first geographic location are combined with first television broadcast signals from the first geographic location, and so that second icon signals representing second weather parameter signals sensed at a second geographic location different from the first geographic location are combined with second television broadcast signals from the second geographic location; and

means coupled with the production switching means for

selecting an output television signal corresponding to either the first icon signals representing the first weather parameter signals sensed at the first geographic location combined with the first television broadcast signals from the first geographic location or the second icon signals representing the second weather parameter signals sensed at the second geographic location combined with the second television broadcast signals from the second geographic location.

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35. (new) The system of claim 34, wherein the television broadcast signals are live video signals including portions which can vary responsive to the weather parameters prevailing at the geographic locations.

36. (new) The system of claim 34, wherein the sensing means includes means for sensing wind direction prevailing at the plurality of geographic locations and for generating wind direction signals representing the sensed wind direction, and means for sensing wind speed prevailing at the plurality of geographic locations and for generating wind speed signals representing the wind speed.

37. (new) The system of claim 36, wherein the monitoring station includes a microcontroller coupled to receive the weather parameter signals from the sensing means, and wherein the transmitting means includes a wireless modem coupled to the

microcontroller to transmit the wind direction signals and the wind speed signals from the monitoring station.

38. (new) The system of claim 37, wherein the wireless modem is coupled with a cellular communications network.

39. (new) The system of claim 37, wherein the wireless modem is coupled with a UHF radio communications network.

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40. (new) The system of claim 37, wherein the icon signal generating means is simultaneously responsive to the wind direction signals, to create a wind direction icon signal representing a wind direction icon, and to the wind speed signals, to create a wind speed icon signal representing a wind speed icon.

41. (new) The system of claim 34, wherein the weather parameters prevailing at each of the plurality of geographic locations are continuously monitored for changes over time, so that changes in the weather parameters can be matched with changes in the television broadcast signals.

42. (new) The system of claim 41, wherein the transmitting means is a shared transmitting means, having time-multiplexing means for establishing communications between the monitoring station and the base station.

43. (new) The system of claim 42, which further includes means for periodically polling the monitoring station, for the continuous monitoring of the changes in the weather parameters over time.

44. (new) The system of claim 41, wherein the weather parameters prevailing at each of the plurality of geographic locations are continuously monitored in real-time.

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45. (new) The system of claim 34, wherein the production switching means includes means for merging the icon signals with the television broadcast signals, the merging means producing the output television signal representing the weather parameter icons superimposed on the television broadcast signals.

46. (new) The system of claim 45, which further includes means for generating an advertising icon signal representing an advertising icon including advertising indicia, and wherein the output television signal produced by the merging means includes an advertising icon merged with the weather parameter icons superimposed on the television broadcast signals.

47. (new) The system of claim 34, wherein the monitoring station includes a microcontroller coupled to receive the weather parameter signals from the sensing means, and wherein the microcontroller includes means for sampling the weather

parameter signals generated by the sensing means, and interrupt logic for servicing interrupts generated by the sampling means.

48. (new) The system of claim 47, wherein the microcontroller further includes interrupt service routines for configuring the sampling means and to retrieve sampled data from the sampling means, and switch logic responsive to an operator and operatively coupled with the interrupt service routines for configuring and programming the microcontroller.

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49. (new) The system of claim 48, wherein the microcontroller further includes protocol interrupt logic for coordinating and executing series communication of the sampled data from the microcontroller to the base station.

50. (new) The system of claim 47, wherein the base station includes multi-point serial communications protocol logic for coordinating and executing serial communications between the base station and the microcontroller of the monitoring station.

51. (new) The system of claim 50, wherein the protocol logic is based on a poll-select protocol.

52. (new) The system of claim 47, wherein the microcontroller further includes operator interface means coupled with the microcontroller.

53. (new) The system of claim 52, wherein the operator interface means enables a selective display of status conditions of the monitoring station.

54. (new) The system of claim 52, wherein the operator interface means enables selection of the monitoring station to be sampled.

55. (new) The system of claim 54, wherein the operator interface means enables selection of a graphic for displaying data received from the monitoring station.

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56. (new) The system of claim 52, wherein the operator interface means includes at least one remote status window for the monitoring station coupled with the base station, for displaying status conditions and sampled data to the operator.

57. (new) The system of claim 56, wherein the operator interface means further includes means for controlling the sampling and the display of the monitoring station, and means for setting graphic parameters and for controlling display of icons associated with the monitoring station.

58. (new) The system of claim 57, which further includes graphics presenting and updating logic means coupled with the operator interface means, for combining operator inputs

with the sampled data from the monitoring station, and for responsively displaying the graphics.

59. (new) The system of claim 58, wherein the graphics presenting and updating logic means is coupled with protocol interrupt logic for coordinating and executing communication of the sampled data from the microcontroller to the base station, for refreshing the sampled data from the monitoring station, thereby providing an up-to-the-minute display of weather conditions for display with the television broadcast signals.

60. (new) The system of claim 59, wherein the weather conditions and the television broadcast signals are continuously monitored and displayed in real-time.

61. (new) A system for integrating data representing weather parameters prevailing at a plurality of geographic locations into television broadcast signals originating from and related to the plurality of geographic locations, the system comprising:

a monitoring station located at each of the plurality of geographic locations, the monitoring station including,  
means for sensing the weather parameters prevailing at each of the plurality of geographic locations, and for generating



weather parameter signals representing the weather parameters, and means for transmitting the weather parameter signals from the monitoring station; and a base station including, means for receiving the weather parameter signals from the monitoring station, and for providing the weather parameter signals to the base station, means for generating icon signals representing weather parameter icons in response to the weather parameter signals, the weather parameter icons representing the weather parameters sensed at the plurality of geographic locations, and means for converting the icon signals into television signals representing the weather parameters, the television signals being in a format suitable for integration into the television broadcast signals; wherein the monitoring station includes a microcontroller coupled to receive the weather parameter signals from the sensing means, and wherein the microcontroller includes means for sampling the weather parameter signals generated by the sensing means, and interrupt logic for servicing interrupts generated by the sampling means.

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62. (new) The system of claim 61, wherein the microcontroller further includes interrupt service routines for configuring the sampling means and to retrieve sampled data from the sampling means, and switch logic responsive to an operator and operatively coupled with the interrupt service routines for configuring and programming the microcontroller.

63. (new) The system of claim 62, wherein the microcontroller further includes protocol interrupt logic for coordinating and executing series communication of the sampled data from the microcontroller to the base station.

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64. (new) The system of claim 61, wherein the base station includes multi-point serial communications protocol logic for coordinating and executing serial communications between the base station and the microcontroller of the monitoring station.

65. (new) The system of claim 64, wherein the protocol logic is based on a poll-select protocol.

66. (new) The system of claim 61, wherein the microcontroller further includes operator interface means coupled with the microcontroller.

67. (new) The system of claim 66, wherein the operator interface means enables a selective display of status conditions

of the monitoring station.

68. (new) The system of claim 66, wherein the operator interface means enables selection of the monitoring station to be sampled.

69. (new) The system of claim 68, wherein the operator interface means enables selection of a graphic for displaying data received from the monitoring station.

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70. (new) The system of claim 66, wherein the operator interface means includes at least one remote status window for the monitoring station coupled with the base station, for displaying status conditions and sampled data to the operator.

71. (new) The system of claim 70, wherein the operator interface means further includes means for controlling the sampling and the display of the monitoring station, and means for setting graphic parameters and for controlling display of icons associated with the monitoring station.

72. (new) The system of claim 71, which further includes graphics presenting and updating logic means coupled with the operator interface means, for combining operator inputs with the sampled data from the monitoring station, and for responsively displaying the graphics.

73. (new) The system of claim 72, wherein the graphics presenting and updating logic means is coupled with protocol interrupt logic for coordinating and executing communication of the sampled data from the microcontroller to the base station, for refreshing the sampled data from the monitoring station, thereby providing an up-to-the-minute display of weather conditions for display with the television broadcast signals.

74. (new) The system of claim 73, wherein the weather conditions and the television broadcast signals are continuously monitored and displayed in real-time.

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75. (new) A method for integrating data representing weather parameters prevailing at a plurality of geographic locations into television broadcast signals originating from and related to the plurality of geographic locations, the method comprising the steps of:

monitoring weather conditions at each of the plurality of geographic locations, the monitoring including sensing the weather parameters prevailing at each of the plurality of geographic locations, and generating weather parameter signals representing the weather parameters;

transmitting the weather parameter signals from the monitoring station to a base station for receiving the weather parameter signals, for providing the weather parameter signals to the base station;

generating icon signals representing weather parameter icons in response to the weather parameter signals, the weather parameter icons representing the weather parameters sensed at the plurality of geographic locations;

converting the icon signals into television signals representing the weather parameters, the television signals being in a format suitable for integration into the television broadcast signals;

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receiving the television signals representing the weather parameters and the television broadcast signals in production switching means for combining the television signals representing the weather parameters and the television broadcast signals, wherein the combining includes a first combining of first icon signals representing first weather parameter signals sensed at a first geographic location with first television broadcast signals from the first geographic location, and a second combining of second icon signals representing second weather parameter signals sensed at a second geographic location different from the first geographic location with second television broadcast signals from the second geographic location; and

selecting an output television signal corresponding to either the first icon signals representing the first weather parameter signals sensed at the first geographic location combined with the first television broadcast signals from the first geographic location or the second icon signals representing

the second weather parameter signals sensed at the second geographic location combined with the second television broadcast signals from the second geographic location.

76. (new) The method of claim 75, which further includes the step of providing, as the television broadcast signals, live video signals including portions which can vary responsive to the weather parameters prevailing at the geographic locations.

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77. (new) The method of claim 75, which further includes the steps of sensing wind direction prevailing at the plurality of geographic locations and generating wind direction signals representing the sensed wind direction, and sensing wind speed prevailing at the plurality of geographic locations and generating wind speed signals representing the wind speed.

78. (new) The method of claim 75, which further includes the step of performing the transmitting step and the receiving step with wireless communications.

79. (new) The method of claim 75, which further includes the steps of continuously monitoring the weather parameters prevailing at each of the plurality of geographic locations for changes over time, and matching changes in the weather parameters with changes in the television broadcast

signals.

80. (new) The method of claim 79, which further includes the step of periodically polling the monitoring station, for continuously monitoring the changes in the weather parameters over time.

81. (new) The method of claim 80, wherein the weather parameters prevailing at each of the plurality of geographic locations are continuously monitored in real-time.

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82. (new) The method of claim 75, which further includes the steps of merging the icon signals with the television broadcast signals, and producing the output television signal representing the weather parameter as icons superimposed on the television broadcast signals.

83. (new) The method of claim 82, which further includes the steps of generating an advertising icon signal, representing an advertising icon including advertising indicia, and merging the advertising icon signal with the weather parameter icon signals and the television broadcast signals, superimposing the advertising icon and the weather parameter icons on the television broadcast signals.

84. (new) The method of claim 75, which further

includes the step of selectively displaying status conditions of the monitoring station responsive to an operator interface.

85. (new) The method of claim 84, which further includes the step of selecting the monitoring station to be sampled.

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86. (new) The method of claim 85, which further includes the step of displaying a graphic for displaying data received from the monitoring station.

87. (new) The method of claim 86, which further includes the step of displaying status conditions and sampled data associated with the monitoring station.

88. (new) The method of claim 87, which further includes the steps of controlling the sampling and the display of the monitoring station, and setting graphic parameters and controlling display of icons associated with the monitoring station.

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